

Claims

[c1] 1. A community dialing circuit apparatus incorporating an Internet Protocol (IP) phone and a Plain Old Phone Service (POTS) phone, comprising:

an IP phone system for activating an IP phone according to an IP phone number;

a POTS phone system for activating a POTS phone according to a POTS phone number;

an insulation system electrically connected between the IP phone system and the POTS phone system for insulating the IP phone system from the POTS system; and

a key panel connected to the IP phone system and the POTS phone system;

wherein when a city power is on and a first phone number having a format of the IP phone number is inputted from the key panel, the first phone number is used as the IP phone number, the IP phone system outputs a first dialing data signal to the insulation system, the insulation system receives the first dialing data signal and outputs a second dialing data signal to the POTS phone system to disable the POTS phone, and the IP phone is activated;

wherein when the city power is on and a second phone

number having a first format of the POTS phone number is inputted from the key panel, the second phone number is transferred by the insulating system and used as the POTS phone number to active the POTS phone, and the IP phone is disabled;

wherein when the city power is off and a third phone number having a second format of the POTS phone number is inputted from the key panel, the IP phone is turned off without a power supply from the city power, and the third phone number is used to active the POTS phone.

- [c2] 2. The community dialing circuit apparatus of claim 1, wherein the key panel further comprises:
 - an IP phone keypad connected to the IP phone system;
 - and
 - a POTS phone keypad connected to the POTS phone system; wherein
 - the key panel is disposed above the IP phone keypad and the POTS phone keypad, wherein each key of the key panel is disposed above a key of the IP phone keypad and above a key of the POTS phone keypad, whereby when a phone number is inputted, the IP phone keypad and the POTS phone keypad receive the phone number respectively.

- [c3] 3. The community dialing circuit apparatus of claim 1, wherein the first format of the POTS phone number is the same as the second format of the POTS phone number.
- [c4] 4. The community dialing circuit apparatus of claim 1, wherein the first format of the POTS phone number is different from the second format of the POTS phone number.
- [c5] 5. The community dialing circuit apparatus of claim 2, wherein the POTS phone system further comprises:
 - a plurality of first input terminals and a plurality of second input terminals connected to each key of the POTS phone keypad respectively;
 - a switch device connected to the first input terminals of the POTS phone keypad, wherein the switch device has a plurality of third terminals corresponding to the first input terminals;
 - a POTS phone dialing unit connected to the POTS phone system, the third terminals and the second input terminals; and
 - a POTS phone control unit connected to the switch device, the third terminals, the second input terminals and the insulation system;wherein when the city power is on and the second phone number having the first format of the POTS phone num-

ber is inputted from the key panel, a connection between the first input terminal of the POTS phone keypad and the POTS phone dialing unit is turned off by the switching device, the second phone number is transferred by the insulating system and used as the POTS phone number to active the POTS phone, and the IP phone is disabled;

wherein when the city power is off and a third phone number having a second format of the POTS phone number is inputted from the key panel, the IP phone is turned off without a power supply from the city power, the connection between the first input terminal of the POTS phone keypad and the POTS phone dialing unit is turned on by the switching device, the third phone number is received by the POTS phone dialing unit via the second input terminals and the third terminals to active the POTS phone.

[c6] 6. The community dialing circuit apparatus of claim 1, wherein the IP phone system further comprises:

- a logic converting unit connected to the IP phone keypad for converting the phone number to an IP dialing data signal;
- a main control unit connected to the logic converting unit and the insulation system for receiving the IP dialing data signal and outputting the first dialing data signal to

the insulation system and outputting an IP phone transmission signal;
an IP phone control unit connected to the main control unit for receiving the IP phone transmission signal and outputting an IP phone control signal; and
a RJ-45 port connected to a phone company and to the IP phone control unit via an IP phone interface for activating an IP phone by the IP phone control signal.

- [c7] 7. The community dialing circuit apparatus of claim 1, wherein the POTS phone system comprises:
 - a POTS phone interface connected to the POTS phone dialing unit for outputting a POTS phone interface signal according to the POTS phone number; and
 - a RJ-11 port connected to a phone company and to the POTS phone interface for activating a POTS phone by the POTS phone interface signal.
- [c8] 8. The community dialing circuit apparatus of claim 1, wherein the insulation system comprises a plurality of phototransistors.
- [c9] 9. The community dialing circuit apparatus of claim 1, wherein the switch device comprises a plurality of transistors.